PATENT
Attorney Docket No.: 390533
Express Mail Label No.: EV413241479US

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appellant(s): Spitz *et al.*	Confirmation No.: 1353
Serial No.: 09/783,233	Examiner: C. Toomer
Filed: February 14, 2001	Group Art Unit: 1714
For: ALKOXYMETHYL MELAMINE CROSSLINKERS	Attorney Docket No. 390533

Mail Stop: Appeal Brief-Patents
Commissioner For Patents
P.O. Box 1450
Alexandria, VA 22313-1450

APPEAL BRIEF

Dear Sir:

In accordance with 37 C.F.R. § 41.37, and fully responsive to the Office Action of December 7, 2004, Appellants hereby file the Appeal Brief in support of the Appeal in the above-identified matter (hereinafter the '233 Application). A Notice of Appeal, with the appropriate fee of $500 as required by 37 C.F.R. §§41.31, 41.20(b)(1), was filed on March 7, 2005. Three copies of this brief are enclosed. The $500 fee for this appeal brief, as required by 37 C.F.R. §41.20(b)(2), is also filed herewith. This appeal brief is timely filed within two months of the mailing of the notice of appeal, and further pursuant to 37 C.F.R. §1.8 and §1.10.

(1) **Real party in interest.**

The real party in interest for this appeal is Surface Specialties, S.A. Evidence of this assignment, which was recorded on May 16, 2001, may be found at reel/frame 011820/0887.

(2) **Related appeals and interferences.**

No other appeals or interferences are currently known to Appellants that will directly affect, be directly affected by, or have a bearing on the decision to be rendered by the Board of Patent Appeals and Interferences in the instant appeal.

(3) **Status of claims.**

Claims 1-16 are currently pending in the application and stand rejected under 35 U.S.C. §103(a) as being obvious over U. S. Patent Application No. 5,593,735 granted to Wu (hereinafter "Wu").

(4) **Status of amendments.**

The '233 Application was filed on February 14, 2001. A first office action was mailed on October 24, 2002, to which a response was filed and entered September 7, 2003. On December 7, 2004, a final office action was mailed, prompting this appeal. A Notice of Appeal was filed on March 7, 2005. Claims 1-16 are currently pending, of which Claims 2-15 are original (without claim amendment during prosecution). Claims 1 and 16 were amended to correct grammatical errors in the response dated September 7, 2003.

(5) **Summary of claimed subject matter.**

The inventions of Claims 1-16 concern a crosslinker composition of alkoxymethyl melamine derivatives as provided in pages 3 and 4 of the instant specification. In particular, in Claim 1, from which Claims 2-15 depend, the claim utilizes "consisting essentially of" language. Claim 16 is a second independent Claim, and defines the crosslinker composition in terms of weight percentages of the various components. Claim 1 is as follows:

> 1. A crosslinker composition consisting essentially of
> 50 to 95 weight percent monomeric C_1 to C_8 alkoxymethyl melamine derivatives containing not more than about 0.20 wt. % of imino (>N-H) groups; and

5 to 50 weight percent oligomeric C_1 to C_8 alkoxymethyl melamine derivatives, wherein

(i) when said composition comprises from 5 to 20 wt. % oligomer, said composition has an imino content of less than 0.20 wt. %;

(ii) when said composition comprises from 20 to 30 wt. % oligomer, said composition has an imino content, I, defined by the algorithm, $I \leq 0.02X - 0.2$, where X is the weight percent oligomer in the composition and I is expressed in weight percent imino; or

(iii) when said composition comprises from 30 to 50 wt. % oligomer, said composition has an imino content of less than 0.7 wt. %, and

c) wherein said weight percent of a) plus b) does not exceed 100%.

(6) Grounds for rejection to be reviewed on appeal.

Whether Claims 1-16 are obvious in view of U. S. Patent Application No. 5,593,735 granted to Wu.

(7) Argument.

Wu does not teach or suggest each and every claim limitation within Claims 1-16 as required by 35 U.S.C. § 103. Wu further does not employ the claims language "consisting essentially of" as provided by Appellants' invention.

When applying 35 U.S.C. §103, the following tenets of patent law are binding:

a) The claimed invention must be considered as a whole;

b) The references must be considered as a whole and must suggest the desirability and thus the obviousness of making the combination;

c) The references must be viewed without the benefit of impermissible hindsight vision afforded by the claimed invention; and

d) Reasonable expectation of success is the standard with which obviousness is determined. MPEP §2141.01, *Hodosh v. Block Drug Co., Inc.*, 786 F.2d 1136, 1134 n.5, 229 U.S.P.Q. 182, 187 n.5 (Fed. Cir. 1986).

In addition, it is respectfully noted that to substantiate a *prima facie* case of obviousness the initial burden rests with the Examiner who must fulfill three requirements. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge

generally available to one of ordinary skill in the art, to modify the references or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on Appellants' disclosure. (emphasis and formatting added) MPEP § 2143, *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

Wu teaches a curable composition comprising a polyfunctional hydroxyl group containing material, a triazine carbamate, an amino resin crosslinking agent, a triazine carbamate co-crosslinking agent, and an acid cure catalyst. Appellants maintain that Wu does not teach or suggest the crosslinker composition of Appellants' invention.

Appellants specifically maintain that the composition of Wu further **requires a carbamate co-crosslinker**. Appellants assert that the instant invention does not utilize a co-crosslinking agent, and a co-crosslinking agent such as that provided in Wu is never discussed in the chemistry of the instant invention.

Appellants maintain that the presence of a carbamate co-crosslinker would materially affect the crosslinker composition of the instant invention, and further assert that the Claim language "consisting essentially of" as utilized in Claim 1 does not allow for the inclusion of the carbamate co-crosslinker of Wu.

Claim 1

Claim 1 recites a crosslinker composition consisting essentially of

a) 50 to 95 weight percent monomeric C_1 to C_8 alkoxymethyl melamine derivatives containing not more than about 0.20 wt. % of imino (>N-H) groups; and

b) 5 to 50 weight percent oligomeric C_1 to C_8 alkoxymethyl melamine derivatives, wherein

(i) when said composition comprises from 5 to 20 wt. % oligomer, said composition has an imino content of less than 0.20 wt. %;

(ii) when said composition comprises from 20 to 30 wt. % oligomer, said composition has an imino content, I, defined by the algorithm, $I \leq 0.02X - 0.2$, where X is the weight percent oligomer in the composition and I is expressed in weight percent imino; or

(iii) when said composition comprises from 30 to 50 wt. % oligomer, said composition has an imino content of less than 0.7 wt. %, and

c) wherein said weight percent of a) plus b) does not exceed 100%.

In regard to Claim 1, Wu does not teach or suggest a composition consisting essentially of those elements enumerated in Claim 1.

Claims 2-15 depend from Claim 1 and benefit from like argument. However, these Claims have additional features that patentably distinguish over Wu.

Claim 2

For example, Claim 2 recites a composition that is liquid at 20 °C. As argued above, Wu does not disclose or suggest the composition of Claim 2.

Claim 3

In Claim 3, the composition has an imino content of less than about 0.6 wt %. Wu does not disclose or suggest the composition of Claim 3.

Claim 4

Claim 4 recites a composition with an imino content of less than about 0.5 wt %. Wu does not disclose or suggest the composition of Claim 4.

Claim 5

Claim 5 recites a composition with an imino content of less than about 0.4 wt %. Wu does not disclose or suggest the composition of Claim 5.

Claim 6

Claim 6 recites a composition with an imino content of less than about 0.3 wt %. Wu does not disclose or suggest the composition of Claim 6.

Claim 7

Claim 7 recites a composition with an imino content of less than about 0.2 wt %. Wu does not disclose or suggest the composition of Claim 7.

Claim 8

Claim 8 recites a composition with methoxymethyl melamine derivatives. Wu does not disclose or suggest the composition of Claim 8.

Claim 9

Claim 9 recites the composition which is liquid at 20 C. Wu does not disclose or suggest the composition of Claim 9.

Claim 10

Claim 10 recites the composition with an imino content of less than about 0.6 wt. %. Wu does not disclose of suggest the composition of Claim 10.

Claim 11

Claim 11 recites the composition with an imino content of less than about 0.5 wt. %. Wu does not disclose of suggest the composition of Claim 11.

Claim 12

Claim 12 recites the composition with an imino content of less than about 0.4 wt. %. Wu does not disclose of suggest the composition of Claim 12.

Claim 13

Claim 13 recites the composition with an imino content of less than about 0.3 wt. %. Wu does not disclose of suggest the composition of Claim 13.

Claim 14

Claim 14 recites the composition with an imino content of less than about 0.2 wt. %. Wu does not disclose of suggest the composition of Claim 14.

Claim 15

Claim 15 recites the composition wherein for each mole of melamine in the melamine derivatives in said composition there is at least 5.6 moles of alkoxymethyl groups attached to pendant nitrogen atoms of said melamine, where the alkoxymethyl groups are mixtures of methyoxymethyl and minor amounts higher alkoxymethyl groups; where the amount of higher alkoxymethyl groups present does not inhibit curing of a standard coating at 66 °C to a hardness which survives at least 30 MEK rubs. Wu does not disclose of suggest the composition of Claim 15.

Claim 16

Claim 16 recites a crosslinker composition with specific monomeric and oligomeric alkoxymethylated melamine components. Wu does not disclose or suggest the composition of Claim 16

As argued above, Wu does not teach or suggest the compositions of Appellants' invention consisting essentially of the components as defined at least by independent Claim 1 and Claim 16, and the dependent Claims thereby.

(8) <u>Claims appendix</u>.

Appellants enclose a copy of the Claims involved in this appeal as an appendix hereto.

(9) **Evidence appendix.**
Not applicable.

(10) **Related proceedings appendix.**
Not applicable.

CONCLUSION

Appellants respectfully request the Honorable Board of Appeals reverse the Examiner in the rejection of Claims 1-16 under 35 U.S.C. § 103(a). Appellants respectfully solicit allowance of Claims 1-16, all of the Claims appealed and pending in the instant application.

Other than the costs for this appeal brief, no further fees are deemed due in connection with this matter. However, the Commissioner is hereby authorized to charge any fees which may be due in this matter from Deposit Account Number 08-2025.

Respectfully submitted,

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Appendix to Appeal Brief

1. A crosslinker composition consisting essentially of

a) 50 to 95 weight percent monomeric C_1 to C_8 alkoxymethyl melamine derivatives containing not more than about 0.20 wt. % of imino (>N-H) groups; and

b) 5 to 50 weight percent oligomeric C_1 to C_8 alkoxymethyl melamine derivatives, wherein

(i) when said composition comprises from 5 to 20 wt. % oligomer, said composition has an imino content of less than 0.20 wt. %;

(ii) when said composition comprises from 20 to 30 wt. % oligomer, said composition has an imino content, I, defined by the algorithm, $I \leq 0.02X - 0.2$, where X is the weight percent oligomer in the composition and I is expressed in weight percent imino; or

(iii) when said composition comprises from 30 to 50 wt. % oligomer, said composition has an imino content of less than 0.7 wt. %, and

c) wherein said weight percent of a) plus b) does not exceed 100%.

2. The composition according to claim 1 which is liquid at 20 °C.

3. The composition according to claim 1 wherein said composition has an imino content of less than about 0.6 wt. %.

4. The composition according to claim 1 wherein said composition has an imino content of less than about 0.5 wt. %.

5. The composition according to claim 1 wherein said composition has an imino content of less than about 0.4 wt. %.

6. The composition according to claim 1 wherein said composition has an imino content of less than about 0.3 wt. %.

7. The composition according to claim 1 wherein said composition has an imino content of less than about 0.2 wt. %.

8. The composition according to claim 1 wherein said when said alkoxymethyl melamine derivatives are methoxymethyl melamine derivatives.

9. The composition according to claim 8 which is liquid at 20 °C.

10. The composition according to claim 8 wherein said composition has an imino content of less than about 0.6 wt. %.

11. The composition according to claim 8 wherein said composition has an imino content of less than about 0.5 wt. %.

12. The composition according to claim 8 wherein said composition has an imino content of less than about 0.4 wt. %.

13. The composition according to claim 8 wherein said composition has an imino content of less than about 0.3 wt. %.

14. The composition according to claim 8 wherein said composition has an imino content of less than about 0.2 wt. %.

15. The composition according to claim 1 wherein for each mole of melamine in the melamine derivatives in said composition there is at least 5.6 moles of alkoxymethyl groups attached to pendant nitrogen atoms of said melamine, where the alkoxymethyl groups are mixtures of methyoxymethyl and minor amounts higher alkoxymethyl groups; where the amount of higher alkoxymethyl groups present does not inhibit curing of a standard coating at 66 °C to a hardness which survives at least 30 MEK rubs.

16. A crosslinker composition comprising monomeric and oligomeric alkoxymethylated melamine, wherein monomeric alkoxymethylated melamine molecules have 6 moles of substituent groups attached to pendant nitrogen atoms per mole of monomeric melamine, wherein said substituent groups are selected from the group consisting of imino [>N-H], methylol [>N-CH_2OH] , alkoxymethyl [>N-CH_2OR] and acetal [>N-CH_2OCH_2OR]; and wherein difunctional bridging groups between melamine units in oligomeric alkoxymethylated melamine are selected from the group consisting of methylene groups [>N-CH_2-N<] and methylene ether [>N-CH_2OCH_2-N<] groups; wherein:

(a) monomeric alkoxymethylated melamine units comprise at least 50 and up to 95 percent by weight of the monomeric and oligomeric alkoxymethylated melamine units in the composition as determined by size exclusion chromatography,

(b) alkoxymethyl groups comprise at least 5.0 moles of substituent groups attached to pendant nitrogen atoms per mole of monomeric melamine, and

(c) said alkoxymethyl groups on each melamine unit are methoxymethyl or mixtures of methyoxymethyl and higher alkoxymethyl groups; wherein

(d) when said composition comprises from 5 to 20 wt. % oligomer, said composition has an imino content of less than 0.20 wt. %;

(e) when said composition comprises from 20 to 30 wt. % oligomer, said composition has an imino content, I, defined by the algorithm, $I \leq 0.02X - 0.2$, where X is the weight percent oligomer in the composition and I is expressed in weight percent imino; or

(f) when said composition comprises from 30 to 50 wt. % oligomer, said composition has an imino content of less than 0.7 wt. %, and

(g) wherein the weight percent of said monomeric and oligomeric alkoxymethylated melamine molecules does not exceed 100%.

05/10/05

IRW

AFB

CERTIFICATE OF MAILING BY EXPRESS MAIL POST OFFICE TO ADDRESSEE (37 CFR 1.10)			Matter No.
Applicant(s): George T. Spitz, et al.			390533
Serial No.	Filing Date	Examiner	Group Art Unit
09/783,233	February 14, 2001	C. Toomer	1714

Invention Alkoxymethyl Melamine Crosslinkers

I hereby certify that this Transmittal Form (1 page); Fee Transmittal For FY 2005 (1 page in duplicate); Appeal Brief (10 pages in triplicate); authorization to charge $500 for the Appeal Brief filing; authorization to charge additional fees that may be required, or credit any overpayment, to Deposit Account No. 12-0600and return post card are being mailed in an envelope addressed to: Mail Stop: Appeal Brief -- Patent, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on this 9th day of May, 2005.

Sharon Schenk
Name of Depositor

Sharon Schenk
Signature of Depositor

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TRANSMITTAL FORM

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Total Number of Pages in This Submission

Application Number	09/783,233
Filing Date	February 14, 2001
First Named Inventor	George T. Spitz
Art Unit	1714
Examiner Name	C. Toomer
Attorney Docket Number	390533

ENCLOSURES ***(check all that apply)***

- ☒ Fee Transmittal Form
  - ☐ Fee Attached
- ☐ Amendment / Reply
  - ☐ After Final
  - ☐ Affidavits/declaration(s)
- ☐ Extension of Time Request
- ☐ Express Abandonment Request
- ☐ Information Disclosure Statement
- ☐ Certified Copy of Priority Document(s)
- ☐ Reply to Missing Parts/ Incomplete Application
  - ☐ Reply to Missing Parts under 37 CFR1.52 or 1.53
- ☐ Drawing(s)
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- ☐ Petition
- ☐ Petition to Convert to a Provisional Application
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  - ☐ Landscape Table on CD
- ☐ After Allowance Communication to TC
- ☐ Appeal Communication to Board of Appeals and Interferences
- ☒ Appeal Communication to TC **(Appeal Notice, Brief, Reply Brief)**
- ☐ Proprietary Information
- ☐ Status Letter
- ☒ Other Enclosure(s) *(please identify below)*:
  Certificate of Mailing
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Remarks

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm	LATHROP & GAGE LC		
Signature			
Printed Name	Janelle D. Strode		
Date	May 9, 2005	Reg. No.	34,738

CERTIFICATE OF MAILING 37 CFR 1.10

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Signature	Sharon Schenk		
Typed or printed name	Sharon Schenk	Date	May 9, 2005

PTO/SB/17 (12-04v2)
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U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Effective on 12/08/2004.
Fees pursuant to the Consolidated Appropriations Act, 2005 (H.R. 4818).

FEE TRANSMITTAL for FY 2005

MAY 0 9 2005

☐ Applicant claims small entity status. See 37 CFR 1.27

TOTAL AMOUNT OF PAYMENT	($) 500

Complete if Known	
Application Number	09/783,233
Filing Date	February 14, 2001
First Named Inventor	George T. Spitz
Examiner Name	C. Toomer
Art Unit	1714
Attorney Docket No.	390533

METHOD OF PAYMENT (check all that apply)

☐ Check ☐ Credit Card ☐ Money Order ☐ None ☐ Other (please identify) : _____

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FEE CALCULATION

1. BASIC FILING, SEARCH, AND EXAMINATION FEES

	FILING FEES	Small Entity	SEARCH FEES	Small Entity	EXAMINATION FEES	Small Entity	
Application Type	Fee ($)	Fee($)	Fee($)	Fee($)	Fee($)	Fee($)	Fees Paid ($)
Utility	300	150	500	250	200	100	____
Design	200	100	100	50	130	65	____
Plant	200	100	300	150	160	80	____
Reissue	300	150	500	250	600	300	____
Provisional	200	100	0	0	0	0	____

2. EXCESS CLAIM FEES

Fee Description	Fee ($)	Small Entity Fee ($)
Each claim over 20 (including Reissues)	50	25
Each independent claim over 30 (including Reissues)	200	100
Multiple dependent claims	360	180

Total Claims	Extra Claims	Fee($)	Fee Paid ($)
____ -31 or HP=	____	x ____	= ____

HP = highest number of total claims paid for, if greater than 20.

Indep. Claims	Extra Claims	Fee($)	Fee Paid ($)
____ - 3 or HP=	____	x ____	= ____

HP = highest number of independent claims paid for, if greater than 3.

Multiple Dependent Claims Fee ($)	Fee Paid ($)
____	____

3. APPLICATION SIZE FEE

If the specification and drawings exceed 100 sheets of paper (excluding electronically filed sequence or computer listings under 37 CFR 1.52(e)), the application size fee due is $250 ($125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).

Total Sheets	Extra Sheets	Number of each additional 50 or fraction thereof	Fee ($)	Fee Paid ($)
____ - 100 =	____	/ 50 = ____ (round up to a whole number) x		= ____

4. OTHER FEE(S)

	Fees Paid ($)
Non-English Specification, $130 fee (no small entity discount)	____
Other (e.g., late filing surcharge) : Filing Appeal Brief	500

SUBMITTED BY

Signature		Registration No. (Attorney/Agent) 34,738	Telephone (816) 4600-5859
Name (Print/Type)	Janelle D. Strode		Date May 9, 2005